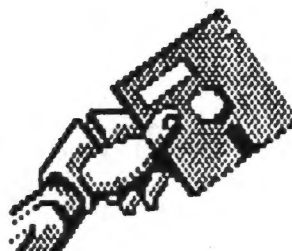
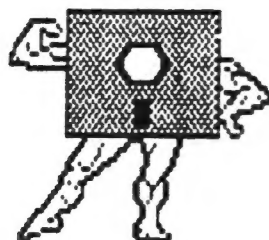


LISTing Newsletter

Newsletter of the Long Island
Sinclair/Timex Users Group

Next Meeting
MARCH 12 1995

SINCLAIR																
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	QL
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



Listing Policy

Annual Dues \$16.00

One "sample" copy sent upon receipt of Business size SASE.
Copies provided on EXCHANGE BASIS with other bona fide user
groups. LISTing is published monthly except July and August by
LIST (Long Island Sinclair Timex) Group, a not for profit user group.

We are always looking for articles, programs, reviews etc. to keep our
members informed and entertained. You maintain full credit and copyright.

Portions of this publication may be reproduced, without written consent.
Please give credit to LIST when reprinting articles.

LIST disclaims any responsibility for any damage you may do to your
computer as a result of reading any articles in LISTing.

LISTINGS FROM HARVEY R.

L.I.S.T. OFFICERS

PRES. HARVEY RAIT
 VICE PRES. BOB GILDER
 COR. SECY. JOHN PAZMINO
 ASSOC EDITORS FRED STERN
 HARVEY RAIT
 PUBLISHER BOB GILDER
 LIBRARIAN TOM SKAPINSKY

PLEASE SEND ALL INQUIRIES AND
 SUBMISSIONS (INCLUDING DUES)

TO; L.I.S.T.

HARVEY RAIT

5 PERI LANE

VALLEY STREAM, N.Y. 11581

COMING EVENTS: THE NEXT L.I.S.T.
 MEETING WILL BE SUN MARCH 12
 AT 2 P.M. AT THE HOME OF HARVEY
 RAIT (SEE ADDRESS ABOVE).

Tel (516) 791-6247

REPORT ON THE MEETING OF FEB. 12;
 THE MEETING STARTED EARLY SINCE
 ONLY 4 MEMBERS WERE ABLE TO BE
 PRESENT. TOM AND FRED HAD CALLED
 IN EARLIER TO SEND THEIR RE-
 GRETS. THE MAIN TOPIC WAS CON-
 CERNING WHAT WE SHOULD DO WITH
 THE VAST AMOUNT OF TIMEX/
 SINCLAIR PUBLICATIONS THAT WE
 HAVE ACCUMULATED OVER THE MORE
 THAN 10 YEARS OF OUR EXISTENCE,
 AND A LARGE AMOUNT OF HARDWARE
 THAT HAS ACCUMULATED IN OUR
 INVENTORY. AN ARTICLE IN THIS
 ISSUE GIVES MORE DETAILS.
 BOB GILDER REINKED A COUPLE OF
 RIBBONS FOR A GORILLA/BANANA
 PRINTER THAT JOHN PAZMINO HAD
 DONATED TO L.I.S.T. WE RAN
 SEVERAL PROGRAMS FROM THE
 QUANTA LIBRARY, INCLUDING THE
 DATABASE FROM THE LIBRARY DB
 SINCE THE DB HAD MORE THAN 600
 PROGRAMS, ITS PRINTOUT WAS TER-
 MINATED AFTER 185 SINCE THE RE-
 INKED RIBBON STARTED TO LOSE
 INTENSITY AND THE PRINTER PAPER
 STACK WAS RUNNING LOW.

MEETING ADJOURNED AT 5 P.M.

AFTER A FAIRLY LONG HIATUS FROM
 THE ARDORS OF CONTRIBUTING TO
 THE MONTHLY PREPARATION OF OUR
 BULLETIN, I'M GETTING BACK IN
 THE SADDLE AGAIN.

FRED STERN IS RELINQUISHING HIS
 REINS DUE TO A RELOCATION THAT
 IS IMMINENT. I HAVE TO CONSTANT-
 LY REVIEW THE QUILL PROCEDURES
 AND CONSULT THE DICTIONARY FOR
 THE ORDINARY WORDS THAT ARE
 USED IN CONVERSATION BUT DON'T
 LOOK QUITE RIGHT WHEN PUT INTO
 PRINT.

AT THE LAST MEETING BOB G.
 HELPED ME GET STARTED WITH A
 TRANSFER UTILITY THAT RECOPIED
 PROGRAMS (QUILL IN PARTICULAR)
 INSERTING DISK COMMANDS IN
 PLACE OF THE MICRODRIVE
 COMMANDS. THEN I HAD TO GET MY
 SERIAL PRINTER, A SEARS
 S600, WHICH IS EQUIVALENT TO A
 BROTHERS EP44, WORKING WITH THE
 PROPER PRINTER DAT EMBEDDED IN
 QUILL. MORE ON THE EP44 AT
 ANOTHER TIME.

OVER THE LAST YEAR OR TWO IT IS
 QUITE EVIDENT THAT OUR MONTHLY
 NEWSLETTER IS HEAD AND
 SHOULDERS ABOVE ANY OF THE
 OTHER USER GROUP PUBLICATIONS
 IN THE USA. WE SUPPORT ALL OF
 THE TS-1000, TS2068 AND QL
 MODELS. SO IF ANY OF THE MANY
 USERS ARE STILL OUT THERE AND
 ARE WORRIED THAT THEY ARE BEING
 ABANDONED BECAUSE THEIR OLD
 USER GROUP IS NO LONGER DOING
 WHAT THEY USED TO, REMEMBER-;
 FOR ONLY \$16 YEARLY DUES TO
 L.I.S.T. YOU CAN STAY INFORMED
 AND SUPPORTED.

AFTER BEING IN THE RETAIL
 BUSINESS FOR 18 YEARS I'M NOT
 USED TO THE LUXURY OF BEING
 HOME ON AN OFFICIAL HOLIDAY
 TODAY BEING LINCOLN'S BIRTHDAY.
 NO MAIL, BANKING, OR GARBAGE
 PICKUP. THERE'S NOT EVEN OJ.
 COURT TODAY. A PERFECT DAY TO DO
 MY NEWSLETTER WORK.

QL CORNER

Last month I touched upon the set-up for the Perfection Plus word processor printer driver. The reason for doing so was that even though the manual sports 123 pages of text, however, it doesn't follow through about embedding the control characters for any new printer translates added to the printer driver.

Another area regarding Perfection Plus, is when the user wants to print out a document with, say, all odd pages and then all even pages of the same document so they can be printed as a book; odd pages on one side; even pages on the other side. I have had limited success with this process using Perfection Plus until Bob Malloy (LIST Treasurer), decided to follow the printer prompt sequence as it dictates and instead of printing the file to the printer, it is printed to a file (as you would with Quill '_lis' file).

The sequence is as follows:

Press F3, enter P for the Print prompt, on the command line a prompt will appear as 'from page 1', Enter. The next prompt appears 'to Page 1, change this to, say 21, Enter. The next prompt asks 'Skip Alternate pages N/Y?', type 'Y', Next prompt requests: 'Print device/file: ser1'. Delete ser1 and enter the device and filename such as: 'FLP1_Oddfile', Enter. Next prompt prompt: Pause Y/N?, Enter N for NO. The last prompt states Prepare printer...any key. Printing starts and all odd pages from 1 to 21 will be printed to a file. Any control code characters will show up when you load it back into Perfection or perhaps, The Editor.

You could now, start the same sequence over, however, substitute page 1 for page 2 and page 21 becomes page 22 and all even pages will be printed to a file, say, FLP1_EVENfile.

After you load your into from Perfection, scroll down through your text. If control characters are present, you may notice that some lines within your text will stretch well beyond the normal margin setting for the file. Do not let this bother you! While printing the file, the printer reads the control codes, and the text will move to the right and the right-hand margin will indicate a perfect line within that paragraph.

You may start printing the file to your printer. When you have completed printing the ODDfile, press the Form Feed button on your printer so that a single sheet trails the 21st page. The need for the blank page at the end of the printed file is to keep the 'Paper Out' switch activated so that all of page 22 text from the EVENfile will be printed out.

Caution: When you remove the printed text from the ODDfile, turn over the paper stack of ODDtext and insert the printed copy with the text facing UP! Set your 'Top of Form' (top of the first page) at the same location as the ODDfile to ensure that the document footers line line up with the back-side of your printed text.

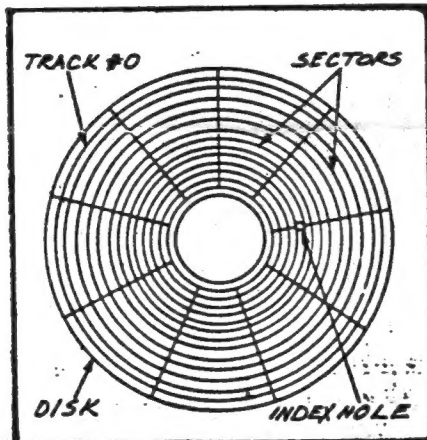
I normally print all my text files from The Editor SE, which provides lots of control during printing. Some times, when I have a very long file to print, I use a small printer program which I modified from a program listed in The Editor manual. Within this program there is lots of room to add as many printer translates as you require and this program has a procedure which will pause the printer when it reads a control sequence of CTRL/P (a P with a bar on top of the P).

Why use a pause, you say? I have found when I print a very large file, over 40 pages, the printer head of my Panasonic KXP 1124 printer becomes HOT to the

touch. So I add the CTRL/P at the end of, say, page 20 and the printer happily stops. When I want to resume printing, I just hit ENTER and printing resumes.

Bob Malloy does it another way - he just presses the printer 'ON-LINE' button on his printer and printing stops. Incidentally, when the printer stops, you can adjust a footer or header position during the pause if you find that either the footer or header is creeping, or it is out of line. You can make the adjustment and then press the ON-LINE button and its off you go.

Every once in a while some one asks the question: If a floppy disk is organized as sectors on concentric tracks, aren't the sectors on the outermost tracks much larger than the ones near the center? If that is the case, and each sector holds the same amount of data, isn't there a lot of wasted space in the sectors near the outer part of the disk?



Simple geometry would seem to dictate that you're right, but disk operating system designers would disagree. The diagram shows a disk with its track and sector markings. If we were talking about a 9-sector QL disk, the length of track #0 sector is about 1.7 inches, and a track #80 sector is about 0.8 inches long. While it is true that there is a difference in length between the two sectors, it is not true that there is more empty space on the outer tracks.

The reason for that is because the data is being read from and written to the disk at a constant rate. And since the outer edge of the disk is moving faster than the center, there will be more space between data marks, but they will be presented to the disk drive's head at the same rate no matter what track is being accessed.

The critical parameter in disk storage is timing. The hardware that is doing the reading and writing expects to see pulses of a specific length. The outer tracks turn faster but the data is also spaced farther apart. If the disk operating system wants to store a '1' as a 20-microsecond pulse, it is going to need more room on track #0 than on track #80.

I received my Z88 computer last month and it took approximately 24 hours for me to become comfortable with it. I still cannot download or upload files to or from the Z88 and the QL. The Z88 to QL transfer software appears to provide the necessary commands for transferring files between both computers, however, I cannot complete any transfers. Has any one had success transferring files in either direction? I surely need some help with this problem.

I had ordered the QIMI mouse interface with a high resolution mouse from John Taylor of QUANTA and it arrived at the beginning of March. I followed the instructions from the booklet supplied with the interface and when I booted up QRAM the pointer would only go up and to the right and then beyond the border. The interface was then installed in another QL and it provided the same response as before.

I packed up the interface and mouse to John Taylor for a checkup or another mouse interface. John called me yesterday from England and asked if the ribbon cable was installed in the interface properly? It appears that this is a common problem with the QIMI interface and it should have been documented in the manual. John stated that he would send me another interface on Thursday, March 23rd. I will report on this next month. Boy, am I having tough luck with my new hardware!! See you next month... Bob Gilder

SINCLAIRS IN RUSSIA by Normunds Rudzi'tis

[John Pazmino captured this article from Internet's COMP.SYS.SINCLAIR room during discussions on Sinclair computers in the old Soviet Union and in today's Russia. Mr Rudzi'tis is at SD30038@LVRULV11.LANET.LV]

I do also own ZX Spectrum compatible computer, made in Russia and I think I can tell you. In fact, I own 2 ZX compats, but they are different. My first one was called 'SINTEZ', made in Kiev, and it was nicely designed and factory-made. It was nearly almost compatible with ZX [Spectrum] 48[K], although I have some games that didn't work on it (Renegade, Short Circuit). Sad things - it is broken now... (SU made things [that] didn't last long). Sintez had Kempston and Sinclair joystick ports built in, but didn't emulate port 255 properly - always returned 255. The reason probably is that the RAM in SU clones is based on 4164 clone (called K565RU5) and screen generating circuit is built in such way it can share RAM with Z80 [CPU] without wait states - and such clones work somewhat faster.

So, my ZX wasn't in working state (I forgot to tell - I purchased it for about 30 GBP [~40USD]), but ... my good friend, which dealt with ZX in our region and switched to PC later, had one ZX clone left (WOW! it was one with Beta-Disk clone) and he wanted get rid of it, so now I have some ZX again. It's different clone, called 'Leningrad' and is one of the most awful clones ever built.

1) It doesn't emulate I/O ports: all OUTs goes to port 254 (no port decoding in fact), and IN works in such way: IN with A0 reset reads port 254, IN with A0 set reads Kempston port (incompatible with original because has D5-D7 set).

2) Has a lot on-board fixes in order to work with Beta-Disk interface (it gets too warm after 4 hours of work and I shouldn't write to disk then without cooling it down before).

There are also a lot of other different clones, but none emulates ZX by 100%. Currently a board for ZX 128 clone w/BetaDisk on-board costs 40-50 GBP here [in Latvia] (a lot less in Russia), so it isn't effective to pay so lot for this crap.

Ahh, yes, about software: it's 100% pirated, usually by polish/hungarian hackers (although I suspect I have some snaps made in those countries which declares to protect copyright...) The reason is extremely simple: There is nobody selling legal spectrum games, the only way to get them legally is [to] make trip to UK (it doesn't works any more even there) and buy, paying 1/5 of average monthly salary for 1 ZX game (Any volunteers?) Just read the stuff Z80 snap owners write when somebody asks about legality of useing ZX snaps on PC.

There is also a few Russia-made software, most of it relates to TR-DOS (Tape->Disk copiers, fast formatting utilities etc., but nothing really good and usable.)

Best wishes to everybody and especially to those w/ZX running at home!

Internet Warning Is Issued

Computer security officials issued a warning yesterday to hundreds of thousands of Internet network administrators, alerting them to a potentially serious flaw in a program used to handle electronic mail sent by millions of people each day on the global network.

If exploited by skilled programmers, the flaw in a program called Sendmail could be used to gain unauthorized access to computers, read electronic mail, erase or modify sensitive files and remotely set off rogue programs that would give the programmers control over the computers.

Sendmail is one of the most popular programs used on the several million "hub" computers that route

electronic mail for Internet users.

"There is tremendous potential for people to exploit it," said Barbara Fraser, senior member of the coordination center of the Computer Emergency Response Team in Pittsburgh. The group is an international agency that is partly financed by the Federal Government.

Ms. Fraser said computer companies were working quickly to create software "patches" to fix the flaw in Sendmail. Many patches have already been put in place, she said.

Previous versions of Sendmail have been targets of computer hackers, but Ms. Fraser said the new flaw, which was discovered only recently, could affect "anybody running any version of Sendmail."

PAGE 5

PUBLICATIONS ARCHIVES

After 13 years of accumulation the L.I.S.T. library is ready for a major spring cleaning. We would rather not just throw out all the material, but instead offer it to other user groups or individual TS enthusiasts at a very nominal cost. The ideal situation would be for pickup at my home in Valley Stream, L.I., NY, the alternative would be to ship incurring packing and shipping costs. This is an inventory of some of the items that are available:

Quantity shown in parenthesis.

Magazines : Sinclair (5), Your Sinclair (15), Your Spectrum (2), Elektor Electronics USA (11), K64 Computer (1) Spanish, ZX Computing (4).

Publications : Sync 1981-1984 (20), TS Horizons 1/84 -12/86 (19+14 duplicates), Sync Link 11/92-4/93 (5), Time Design (12 + 9 duplicates, Sum (1).

The above information will also be put out on INFONET, so if you are interested act fast. Items will be negotiated as a bulk or individual basis.

Call Harvey Rait at 516-791-6247.

In addition to the magazines and publications indicated above (and there will be more) we will also be offering a lot of hardware and software. A partial list inventoried so far is as follows:

10 assorted keyboards, TI, Mitsumi, Radio Shack etc. The whole lot for \$10 plus shipping.

1 GE Cassette Recorder System Model 3-5156. Original box includes interface cables and manual, originally designed for Atari and Commodore. \$25 plus shipping

1 TS-1000 with power supply. \$20 plus shipping

1 TS-1000 (no PS). \$10 plus shipping

2 16k rampacks. \$10 plus shipping

Original TS-1000 programs;

Super Math, States and Capitals, The Flight Simulator, The Official Frogger, Chess, The mixed Game Bag, The Stock Option Analyzer. (All require 16K RAM) \$2 each plus shipping.

L.I.S.T.'s TOP 10 reasons why Sinclair-Timex continues to live

#10: TS-1000's float when thrown overboard.

#9: Brit programs are "cute" with their spelling of words like "colour" and "energise".

#8: You can polka to the sound of a tape load into a TS-2068.

#7: Monitor jitter is good exercise for old eyes.

#6: You can save big \$ by not having to buy PC magazines.

#5: The kids that wrote ZX Spectrum game magazines are now in retirement homes.

#4: Internet users are highly amused when you sign on at 300 baud.

#3: A Sinclair QL with 20 peripheral add-ons inspired the inventor of Leggos.

#2: All of the "Lisa" type psychoanalysis programs have been merged and are now living a happy alternative life style.

#1: No waiting with eager anticipation for the new models to come out.

(With some apologies to David Letterman)

USING PARALLEL INTERFACE PRINTERS WITH THE QL

Miracle Systems and other QL hardware manufacturers have introduced centronics parallel interfaces to permit the QL to drive parallel printers, which are just (or even more) common than serially interfaced printers.

Information as to how to install these parallel interfaces to work with the QL is available in the QL manual's INFORMATION section, the fine book by Mike de Sosa "Taking The Quantum Leap", and by the interface manufacturer. To simplify some of that information, the following is offered for your edification.

In order to call for parallel interface in BASIC programs, you must call for it exactly as you would for the SER1 and SER2 interfaces. That means to specify a channel to OPEN, followed by the peripheral designation PAR.

10 OPEN #3,ser1 (opens channel 3 to serial port 1)

10 OPEN #5,par (opens channel 5 to parallel port)

To install the parallel interface to work with QUILL, ARCHIVE, ABACUS or EASEL, turn the QL on (or use reset) without any cartridge or disc in the microdrive or floppy (MDV or FLP). As you prefer select F1 for monitor or F2 for TV. Continue as follows;

1. Place a backup copy of QUILL in MDV1 (or FLP1 for disc). Load and Run INSTALL_BAS. With a disc system you must instruct the QL to use the disc instead of microdrive. With the Miracle Systems Toolkit it is as simple as entering FLP_use MDV. Load and run the install program.

2. Specify where the new printer installation data is to be saved by the program when it prompts for it.

3. Press the SPACE bar to indicate that a parallel interface will be installed.

4. Select the appropriate printer from the menu provided.

5. Select EDIT by pressing F2. Then use the cursor keys to change PORT:NONE to PORT:PAR.

6. Press ESC to end the editing. Then press F5 to save the new installation onto your microdrive or disc.

7. Exit the install program and RESET the QL before trying to use another program.

If everything has been done correctly, any PRINT call from within QUILL (or the other PSION programs) will now direct printer output to the parallel interface.

A separate microdrive cartridge or floppy disc set up for serial interfaces should be set up and kept for future use with serial printers.

There is available for about \$50, a serial to parallel cable that you connect from the printer to the SER2 port of the QL. No other installing procedure is needed since the computer still thinks it is dealing with a serial interface and printer.

Harvey Rait

TS-2068 TASWORD 11 -Changing printer interfaces.

Preface: This article was originally contributed by Dick Wagner in one of the older publications sometime in 1988. It is altered slightly to be more concise.

Tasword 11 is a word processor program for the Timex TS-2068 computer. It is adaptable to various printer interfaces. A recent need was to set up Tasword for a different printer interface, i.e. a change from A&J to Oliger.

The original Tasword program includes a printer menu for showing the printer codes and descriptions. In order to work with an A&J microdrive interface that includes a parallel printer interface, 19 POKES in machine code were required.

This process was used to become compatible with an Olivetti printer. Now it became necessary to use an Oliger interface, and the same Olivetti printer.

The easiest solution is to tabulate the addresses and codes for those addresses used by the A&J interface, and then return all of those altered to their original values, except the 5 used by Oliger. The codes for these 5 addresses were then changed to the values required by Oliger. This revised the Tasword program from the A&J format to the Oliger format, while keeping the menu previously altered.

The method requires reading the PEEKs for the addresses 57578, 57579, and 57998 through 58015. Use the original Tasword program to PRINT the addresses and codes of each on the screen. Print out or tabulate these addresses and numbers. Now add the A&J POKES opposite each address (from the A&J manual). Change those that are different back to their original values. It was seen that 13 of the 20 values required changing. However 5 of these 13 required changing to the Oliger codes instead of back to the original. This new Tasword program was then SAVED for use with the Oliger interface.

The actual POKES and addresses used were as follows;

57579, 32
57999, 127
58000, 203
58001, 103
58005, 0
58006, 0
58007, 211
58008, 127
58009, 0
58010, 62
58011, 247
58013, 251
58014, 219
58015, 127

Harvey Rait

A \$99 device substitutes pedals for the pesky shift, alt and ctl keys.

TYPEWRITER keyboards were once pretty simple things: a key for each letter of the alphabet, numbers, some punctuation marks and a shift key. But as they have been adapted to control computers, they have grown larger and increasingly complex: function keys often represent at least four different commands, depending on whether some combination of the shift, control or alt keys are pressed along with them.

The required contortions are thought to be one cause of the repetitive strain injuries to the arms and hands of people who spend long hours working at computers. Various remedies have been offered, including new keyboards that have different key configurations or are even split in two to ease arm and wrist strain. But now some former research scientists from Russia believe they have put their finger on the problem. Their solution: add foot

pedals at a time, multiple applications can be prepared in advanced, named and stored in Bilbo's software on the host computer. The various stored options can later be pulled off an on-screen menu.

The system can also be programmed through the computer so that each foot pedal can execute more complex commands — simultaneously depressing the control and F6 keys with a single tap of the foot, for example. A pedal can be programmed with one of these “macro” commands of up to 13 keystrokes.

One drawback of the system is that the foot pedals are not a 100 percent accurate replication of the keyboard. For example, the control box does not recognize if the "Num Lock" key has been pressed, which could cause the wrong command to be executed unless the user takes pains to check the keyboard's little Num Lock light first.

The result, a \$99 kit called Step On It that is now available through the maker, as well as the Radio Shack catalogue and various computer dealers, uses three color-coded foot pedals to take the place of three of the most commonly used, or hard to reach, keys. The device is programmable, so the keys the pedals control can be changed, depending on the type of job being done or the preferences of the user.

Some photographers for example, have started using the apparatus so they can have both hands free for positioning and cropping an image as they prepare to scan it into a computer. "The foot pedal replaces the enter key, which is a big help," said Stephen Allen, president of Integrated Technologies, a computer consulting company in New York.

The system's default setting, though, indicates what the primary use is intended to be: using the three pedals as substitutes for the notorious shift, control and alt keys.

"Those are probably the worst keys on the keyboard because you usually have to hold them down while pressing another key," said Sergei Burkov, the director of technology at Bilbo Innovations Inc., a privately held start-up company in Madison, Wis.

In some ways Bilbo, founded last year by Mr. Burkov and several other Russian emigres, is as noteworthy as its computer pedals. Mr. Bur-

Another Russian emigre, Alex Freed, wrote most of the software for the device. And part of the start-up capital came from Russian businessmen back home, Mr. Burkov. "They provided some seed capital," was as specific as we was willing to be.

STEP ON IT, which works with most types of I.B.M.-compatible desktops now on the market, consists of a control box, installed between the keyboard and the main body of the computer, and the three foot pedals. The pedals are connected to the control box with twisted-copper telephone wire. The set-up software comes on a floppy disk.

As Bilbo sees it, the right way to use the system is to have the left foot rest on the pedal that controls the Shift key while the right foot divides its time between the pedals governing alt and control. (A big foot can probably depress two at once, although orthopedists might not recommend the method.) In practice, Mr. Burkov said, many people simply assign one pedal to each foot, kick the third one out of the way, and make up the difference at the keyboard.

Although the Bilbo control unit can only store one configuration for the

For Mr. Burkov, Bilbo's next steps include drawing upon his Russian connection to reduce the company's manufacturing costs. Right now he obtains Taiwanese-made foot pedals from an American supplier, but he soon hopes to switch to pedals of his own design. They could be produced at any number of Russian plants, he said, at acceptable quality but lower prices.

The internal electronics of his product will continue to be American-made. "The difference in cost is not much," he said, "but the quality here is much better."



"Two more records to go and I'll have logged every single item we own for

ANNOUNCING THE 1995 GREATER BALTIMORE HAMBOREE AND COMPUTERFEST



HOST TO THE ARRL MARYLAND STATE CONVENTION

SATURDAY, MARCH 25 AND SUNDAY, MARCH 26

TIMONIUM FAIR GROUNDS

TIMONIUM, MARYLAND



**GIANT AMATEUR RADIO, COMPUTER AND
ELECTRONIC FLEA MARKET, SHOW AND SALE**

FEATURING

ARRL Convention Program and Saturday Evening Banquet

Giant Indoor and Outdoor Show and Sale Areas

Over One Half Million Square Feet of Sales Area

Three Buildings with Over 1,100 Indoor Spaces • Over 5 Acres Indoors

Amateur Radio Manufacturers, Dealers, and Ham Fleamarket

5 Acre Outdoor Hard Surface Tailgate Area • Premium Indoor Tailgate Area

F.C.C. Amateur Radio License Examinations • Over 18,000 Attended in '94

Many Show Special Bargains

Three Buildings • Acres of Parking • Great Food

OUR 24th YEAR

SHOW WILL BE HELD IN ANY WEATHER

Show Hours are: Saturday, 8 to 4 Sunday, 8 to 4 • Admission is \$5.00 Each Day

Weekend admission just \$8.00, advance sale only!

Sponsored by: The Baltimore Amateur Radio Club, Inc. • Post Office Box 95 • Timonium, MD 21094-0095

Dial 410-HAM-FEST for Voice or FAX-Back Information. Anytime!

Outside the State of Maryland, Dial 1-800-HAM-FEST (1-800-426-3378)

VENDORS: Don't get left out. Call or write for your 1995 exhibitor's information, NOW!